

**COURSES & CREDIT DISTRIBUTION FOR B.TECH. PROGRAM
2017-18 BATCH**

Classification	Total No of Credits	First Year Core Credits	Balance Credits	Remarks about Balance of Credits
General	11	8	3	Value Education, Personality Development
Basic Sciences	30	18	12	Prescribed by the BoS
Engineering Sciences & Technical Arts	31	24	7	Soft Skills, Technical Aptitude and one Engineering Sciences & Technical Arts
Program Core	75	-	75	
Professional Electives	27/21	-	27/21	Including Mini project, IPT, internship, etc..
Project	12 / 18	-	12 / 18	To be registered in the 8 th semester only
University Electives	6	-	6	
Total	192	50	142	

B.Tech. (Mechanical) – 2017 batch

COURSE COMPONENTS

Table 1

Sl. No.	Course Code	General – 3 credits	Credits
		Name of the Course	
1	16VE2001	Value Education	2:0:0
2		Personality Development	0:0:1
		Course Total	3

Table 2

Sl. No.	Course Code	Basic Sciences – 12 credits	Credits
		Name of the Course	
1	17MA20**	Vector Calculus and Complex Analysis	3:1:0
2	17MA20**	Mathematical Transforms	3:1:0
3	17MA20**	Numerical Mathematics and Computing	3:1:0
		Course Total	12

Table 3

Sl. No.	Course Code	Engineering Sciences & Technical Arts – 6 credits	Credits
		Name of the Course	
1		Soft skills – I	1:0:0
2		Soft skills – II	1:0:0
3		Technical Aptitude – I	1:0:0
4		Technical Aptitude– II	1:0:0
5	17ME2002	Material Science and Engineering	3:0:0
		Course Total	7

Table 4

Sl. No	Course Code	Program Core – 75 Credits & a full / Part Semester Project	Credits
		Name of the Course	
	17ME2001	Engineering Mechanics	3:0:0
1	17ME2008	Metallurgy Laboratory*	0:0:1
2	17ME2003	Metrology and Measurement Systems	3:0:0
3	17ME2004	Engineering Thermodynamics	3:0:0
4	17ME2005	Mechanics of Solids	3:1:0
5	17ME2006	Manufacturing Processes	3:0:0
6	17ME2007	Metrology Laboratory*	0:0:1
7	17ME2009	Foundry, Smithy, Welding and Sheet Metal Laboratory	0:0:2
8	17ME2010	Machining Processes	3:0:0
9	17ME2011	Thermal Engineering I	3:0:0
10	17ME2012	Kinematics of Machinery	3:1:0
11	17ME2013	Fluid Mechanics and Machinery	3:1:0
12	17ME2014	Machining Laboratory	0:0:2
13	17ME2015	Fluid Mechanics and Strength of Materials Laboratory	0:0:2
14	17ME2016	Machine Drawing	0:0:2
15	17ME2017	Computer Aided Design and Manufacturing	3:0:0
16	17ME2018	Thermal Engineering II	3:0:0
17	17ME2019	Dynamics of Machinery	3:1:0
18	17ME2020	Design of Machine Elements	3:1:0
19	17ME2021	Computer Aided Engineering Laboratory	0:0:2
20	17ME2022	Thermal Engineering Laboratory	0:0:2
21	17ME2023	Dynamics Laboratory	0:0:2
22	17ME2024	Heat and Mass Transfer	3:0:0
23			
24	17ME2026	Fluid Power Control Engineering	3:0:0
25	17ME2027	Design of Mechanical Transmission Systems	3:0:0
26	17ME2028	Heat Transfer Laboratory	0:0:2
27	17ME2029	CAM Laboratory	0:0:2
28	17ME2030	Fluid Power Control and Mechatronics Laboratory	0:0:2
		Total Credits	75

	FSP2999/PSP2998	Full / Part Semester project	18/12
		Total Credits	93/ 87

Table 4

Sl. No	Course Code	Professional Electives – (Minimum of 21 Credits to be Earned)	Credits
		Name of the Course	
1	17ME2025	Resource Management	3:0:0
2	17ME2031	Finite Element Analysis	3:0:0
3	17ME2032	Principles of Mechanical Vibrations	3:0:0
4	17ME2033	Product Design and Development Strategies	3:0:0
5	17ME2034	Composite Materials	3:0:0
6	17ME2035	Design for Manufacture	3:0:0
7	17ME2036	Tribology	3:0:0
8	17ME2037	Design of Jigs, Fixtures and Press Tools	3:0:0
9	17ME2038	Industrial Engineering	3:0:0
10	17ME2039	Rapid Prototyping and Tooling	3:0:0
11	17ME2040	Metal Cutting Theory and Practice	3:0:0
12	17ME2041	Welding Technology	3:0:0
13	17ME2042	Foundry Technology	3:0:0
14	17ME2043	Computational Fluid Dynamics	3:0:0
15	17ME2044	Renewable Energy Sources	3:0:0
16	17ME2045	Advanced Internal Combustion Engines	3:0:0
17	17ME2046	Refrigeration and Air Conditioning	3:0:0
18	17ME2047	Biomass Energy Systems	3:0:0
19	17ME2048	Alternative Fuels for I.C Engines	3:0:0
20	17ME2049	Modern Vehicle Technology	3:0:0
21	17ME2050	Power Plant Engineering	3:0:0
22	17ME2051	Turbomachinery	3:0:0
23	17ME2052	Design of Heat Exchangers	3:0:0

Sl. No	Course Code	University Electives	Credits
		Name of the Course	
1	17ME2053	Mechatronics	3:0:0
2	17ME2054	Industrial Safety Engineering	3:0:0
3	17ME2055	Basic Automobile Engineering	3:0:0
4	17ME2056	Industrial Robotics	3:0:0

B.Tech. (Mechanical Engineering) – 2017 batch

Ist Year (Sem I & II PEP Courses)

S. No.	Course Code	Course Subjects	Course Component	Credits
1	17EN1001	Communication Skills in English	G	3:0:0
2	17EN1002	English Language Lab	G	0:0:2
3	17CH100*	Environmental Studies	G	3:0:0
4	17MA100*	Basic Mathematics to Engineering	BS	3:1:0
5	17MA100*	Calculus and Statistics	BS	3:1:0
6	17PH100*	Applied Physics	BS	3:0:0
7	17CH100*	Applied Chemistry	BS	3:0:0
8	17PH100*	Applied Physics Lab	BS	0:0:2
9	17CH100*	Applied Chemistry Lab	BS	0:0:2
10	17CE100*	Basic Civil Engineering	ES	3:0:0
11	17EE100*	Basic Electrical Engineering	ES	3:0:0
12	17EC100*	Basic Electronics Engineering	ES	3:0:0
13	17ME1001	Basic Mechanical Engineering	ES	3:0:0
14	17MS100*	Technology for Social Needs	ES	3:0:0
15	17ME1002	Engineering Drawing	ES	0:0:2
16	17ME1003	Workshop Practice	ES	0:0:2
17	17CS100*	Fundamentals of Computing and Programming	ES	3:0:0
18	17CS100*	Fundamentals of Computing and Programming Lab	ES	0:0:2
Total Credits				50

Semester III

S. No.	Course Code	Course Subjects	Course Component	Credits
1	17MA20**	Vector Calculus and Complex Analysis	BS	3:1:0
2	17ME2002	Material Science and Engineering	ES	3:0:0
3	17ME2003	Metrology and Measurement Systems	PC	3:0:0
4	17ME2004	Engineering Thermodynamics	PC	3:0:0
5	17ME2001	Engineering Mechanics	PC	3:0:0
6	17ME2006	Manufacturing Processes	PC	3:0:0
7	17ME2007	Metrology Laboratory*	PC	0:0:1
8	17ME2008	Metallurgy Laboratory*	PC	0:0:1
9	17ME2009	Foundry, Smithy, Welding and Sheet Metal Laboratory	PC	0:0:2
10		Soft Skills I	ES	1:0:0
Total Credits				25

Semester IV

S. No.	Course Code	Course Subjects	Course Component	Credits
--------	-------------	-----------------	------------------	---------

1	17MA20**	Mathematical Transforms	BS	3:1:0
2	17ME2010	Machining Processes	PC	3:0:0
3	17ME2011	Thermal Engineering I	PC	3:0:0
4	17ME2005	Mechanics of Solids	PC	3:1:0
5	17ME2013	Fluid Mechanics and Machinery	PC	3:1:0
6	17ME2014	Machining Laboratory	PC	0:0:2
7	17ME2015	Fluid Mechanics and Strength of Materials Laboratory	PC	0:0:2
8	17ME2016	Machine Drawing	PC	0:0:2
9		Soft Skills II	ES	1:0:0
Total Credits				25

Semester V

S. No.	Course Code	Course Subjects	Course Component	Credits
1	17MA20**	Numerical Mathematics and Computing	BS	3:1:0
2	17ME2017	Computer Aided Design and Manufacturing	PC	3:0:0
3	17ME2018	Thermal Engineering II	PC	3:0:0
4	17ME2020	Design of Machine Elements	PC	3:1:0
5	17ME2012	Kinematics of Machinery	PC	3:1:0
6	17ME2021	Computer Aided Engineering Laboratory	PC	0:0:2
7	17ME2022	Thermal Engineering Laboratory	PC	0:0:2
8		Aptitude Training I	ES	1:0:0
9		University Elective	UE	3:0:0
10		Personality development	G	0:0:1
Total Credits				27

Semester VI

S. No.	Course Code	Course Subjects	Course Component	Credits
1	17ME2024	Heat and Mass Transfer	PC	3:0:0
2	17ME2019	Dynamics of Machinery	PC	3:1:0
3	17ME2026	Fluid Power Control Engineering	PC	3:0:0
4	17ME2027	Design of Mechanical Transmission Systems	PC	3:0:0
5	17ME2023	Dynamics Laboratory	PC	0:0:2
6	17ME2028	Heat Transfer Laboratory	PC	0:0:2
7	17ME2029	CAM Laboratory	PC	0:0:2
8	17ME2030	Fluid Power Control and Mechatronics Laboratory	PC	0:0:2
9		Aptitude Training II	ES	1:0:0
10		University Elective	UE	3:0:0
11	16VE2001	Value Education	G	2:0:0
Total Credits				27

Semester VII

S. No.	Course Code	Course Subjects	Course Component	Credits
--------	-------------	-----------------	------------------	---------

1		Professional Elective I	PE	3:0:0
2		Professional Elective II	PE	3:0:0
3		Professional Elective III	PE	3:0:0
4		Professional Elective IV	PE	3:0:0
5		Professional Elective V	PE	3:0:0
6		Professional Elective VI	PE	3:0:0
7		Professional Elective VII	PE	3:0:0
			Total Credits	21

Semester VIII

S. No.	Course Code	Course Subjects	Course Component	Credits
1		Professional Elective	PE	3:0:0
2		Professional Elective	PE	3:0:0
3	PSP2998	Part Semester Project	PC	12
		(OR)		
1	FSP2999	Full Semester Project	PC	18
			Total Credits	18